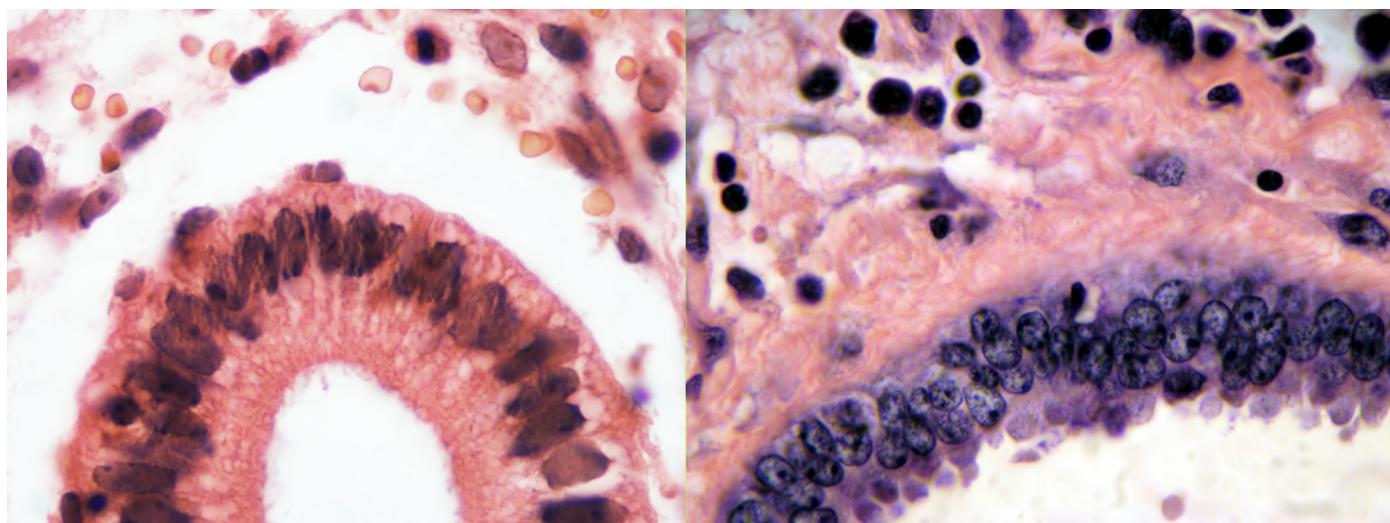


Drug Developed Using X-rays Targets Two Forms of Cancer



APS X-rays can help design drugs to combat cancers, including uterine sarcoma. A normal uterine gland cell is seen on the left compared to a cancerous one the right.

A drug developed with a major assist from the Advanced Photon Source (APS) X-ray facility at Argonne National Laboratory works to combat two deadly forms of cancer.

The drug, Votrient, was approved in 2009 to fight advanced kidney cancer and then approved in 2012 to also fight soft tissue sarcoma.

The research, which led to the development of the drug by GlaxoSmithKline, was undertaken in 2008 at the APS at Argonne. X-rays were used to identify the best target in the cells to block tumor growth.

Votrient is an angiogenesis inhibitor, which interferes with the growth of new blood vessels needed for solid cancer tumors to survive.

Impact

In April 2012, Votrient was approved to treat advanced soft tissue sarcoma, which is a cancer that begins in the muscle, fat, and fibrous tissues. About 10,000 cases occur annually in the U.S., according to the FDA.

Votrient got its start with FDA approval in 2009 to treat advanced kidney cancer. About 65,000 new cases of kidney cancer occur annually in the U.S., according to the American Cancer Society.

Partners

Research was done by scientists from GlaxoSmithKline using the APS and the Industrial Macromolecular Crystallography Association Collaborative Access Team beamline, which is operated through a contract with the Hauptman-Woodward Medical Research Institute.

Funding

The U.S. Department of Energy's Office of Basic Energy Science funds the APS. The X-ray beamline used at the APS is funded through an association of pharmaceutical companies, including Abbott, Bristol-Myers Squibb, GlaxoSmithKline, Merck, Novartis, and Pfizer.



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